of great value, not only as a means of diagnosis, but also as an indication of the necessity of operative interference. Persistent local pain, disability of the patient, loss of general health, strength, and vigor, or the inefficiency of the physician's treatment, all point toward an exploratory laparotomy, which should be performed in the usual manner, and which is the only method which will permanently cure perigastric adhesions. Under proper aseptic precautions it is an operation that may well be regarded as being without any mortality.

PEDIATRICS.

UNDER THE CHARGE OF
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Observations Upon Fœtal Rickets.—FEDE and FINIZIO (*Revue mensuelle des Maladies de l'Enfance*, March, 1901, p. 101) continue the observations upon this condition inaugurated by Fede and Cacace and reported by them to the Congrès de Pédiatrie held in Turin in 1898 (*Pediatria*, February, 1900). [See abstract in this department of the AMERICAN JOURNAL OF THE MEDICAL SCIENCES, September, 1900, p. 353.] In this earlier communication Fede and his assistant reported the results of examinations of 500 new-born infants, among which only one case was found that could be said to have the clinical signs of rachitis, and only four with craniotabes alone. The present paper gives the results of the study of 475 infants observed in the same hospital (Maternita degli Incurabili) in Naples. Of the entire number only 3 showed some of the clinical signs of rachitis, 3 others had only craniotabes, and 4 double genu varum.

In all their observations they have frequently encountered irregularities of the cranial bones, a large anterior fontanelle, with unclosed posterior and lateral fontanelles, and open sutures. This they consider rather as an instance of insufficient development than an expression of rachitis. Microscopical examination of the cranial bones in cases presenting widely open fontanelles and separated sutures has failed to show any lesions recalling those of rachitis. None of them showed the rich vascular network which, according to Kassowitz, is never wanting even in the slightest degrees of rachitism.

The result of this second series of observations serves to confirm the conclusion reached in the earlier work, that fœtal rickets is extremely rare, and to prove in addition that in the new-born large fontanelles and separated sutures are not always indications of rachitis, but that in the majority of cases at least they prove only a retarded ossification.

The Causation of Infantile Scurvy.—C. C. CORLETTE (*British Medical Association Meeting*, August 13, 1900; *Pediatrics*, February 15, 1901, p. 142) advances the hypothesis that infantile scurvy is due to a deficiency of citric acid, which is a normal constituent of fresh milk, a quart of cow's milk containing as much citric acid as a large lemon. This acid exists in milk as a calcium salt, probably the normal calcium citrate, and may be present either in crystalline or amorphous form. The amorphous salt is more soluble in both cold and hot water than the crystalline, and by boiling for a sufficient time it is converted into the latter. When milk is heated to the boiling-point its power of holding citric acid as calcium citrate is greatly diminished, and by so much the more as the citrate is converted into the crystallizable form; and in proportion to the degree of saturation existing in the fresh milk, so is the tendency of the salt to precipitate out and be more or less lost. Since the sterilization of milk involves boiling, it is easily seen how the restriction of diet to sterilized milk may cause a deficiency in the supply of citric acid to an infant, and if deficiency of citric acid be a cause of scurvy the incidence of this disease during the prolonged administration of a cooked or sterilized milk diet is easily explained.

This hypothesis would also explain why the disease does not occur when the milk is only pasteurized, especially when the process of pasteurization is carried out on a large scale.

The following precautions are suggested for the purpose of diminishing as far as possible the loss of citric acid in the boiling of milk: Any water to be used in the formula should be added to the milk before the boiling, so as to get a less concentrated solution of the citrate than obtains in the undiluted milk, and therefore one less likely to suffer loss of this salt by its comparative insolubility after boiling. Further, the milk should not be boiled a moment longer than the occasion requires, should be allowed to cool in the vessel in which it has been boiled, and should be well stirred when cool enough, in order to redissolve the converted crystallized citrate as far as possible.

Finally, to make the milk retain better the precipitated crystals in suspension, the addition of a gummy substance before boiling is suggested. The milk, too, may possibly be made a better solvent of calcium citrate by the addition of an alkaline phosphate, such as sodium or potassium phosphate. Milk normally contains a small amount of potassium phosphate, and this salt may be one of the factors, the author thinks, in helping to make milk a better solvent of calcium citrate than is water. The addition of a small amount of an alkaline phosphate, about ten to fifteen grains to the pint, should therefore help to increase the power of dissolving the citrate.

Position of the Cæcum and the Appendix in the Child.—VALLÉE (*Thèse de Paris*, 1900) bases his thesis upon post-mortem examinations of 100 children, and draws the following conclusions:

1. The cæcum in the child occupies a higher position than in the adult. In 72 cases out of the 100 it is situated above the right antero-superior iliac spine, while in the adult it is below this point. It may be entirely to the left of the median line without inversion of the abdominal organs, as occurred in one of his cases.

2. The position of the appendix depends upon that of the cæcum, and is therefore high. In 78 cases it is entirely above a plane passing through the antero-superior iliac spines. Its mean length is about 5 centimetres, and its direction is most frequently vertical, upward or downward.

3. The colon is kept in place by a peritoneal fold which is reflected upon the posterior abdominal wall at the level of the iliac crest. This mesocolon may be wanting, and the posterior surface of the colon may be without serous envelope. The mesoappendix comes from the mesentery sometimes, but rarely from the colic peritoneum. In half the cases a peritoneal fold arises from the mesentery or from the base of the appendix to be reflected upon the iliac vessels. Other folds of peritoneum come from the appendix to form the ileocæcal fossa. In one case a serous ligament united the base of the appendix to the summit of the bladder.

Whey-cream Modifications in Infant Feeding.—FRANKLIN W. WHITE and MAYNARD LADD (*Philadelphia Medical Journal*, February 2, 1901, p. 218) present a valuable study of milk modifications with special reference to the differential modification of the proteids. Their results are briefly summarized as follows:

1. By the use of whey as a diluent of creams of various strengths we are able to modify cow's milk so that its proportions of caseinogen and whey proteids will closely correspond to the proportions present in human milk. We, therefore, render it much more digestible and suitable for infant feeding.

2. The best temperature for destroying the rennet enzyme in whey is 65.5° C. Whey or whey mixtures should not be heated above 69.3° C. in order to avoid the coagulation of the whey proteids. The percentage of whey proteids in the whey obtained by us was 1 per cent., while in the analysis of the whole milk approximately three-quarters of the total proteid was caseinogen and one-quarter was whey proteids.

3. On the basis of these analyses we were able to obtain whey-cream mixtures, with a maximum of 0.90 per cent. and a minimum of 0.25 per cent. of whey proteids in combination with percentages of caseinogen varying from 0.25 per cent. to 1 per cent.; of fats, from 1 to 4 per cent.; of milk sugar, from 4 to 7 per cent.

4. The emulsions of fat in whey, barley-water, gravity cream, and centrifugal cream mixtures were the same, both in their macroscopical and microscopical appearances. The combination of heat and transportation, such as sometimes occurs in hot weather, partially destroys the emulsion in all forms of modified milk, but this disturbance can be prevented by the simple precaution of keeping the milk cool during delivery.

5. Whey-cream mixtures yield a much finer, less bulky, and more digestible coagulum than plain, modified mixtures with the same total proteids; the coagulum is equalled in fineness only by that of barley-water mixtures. The coagulum yielded by gravity cream mixtures and centrifugal cream mixtures is the same in character.

The Glycolytic Power of the Tissues of the Nursling in Health and in Gastro-enteritis.—TERRIEN (*Revue mensuelle des Maladies de l' Enfance*, January, 1901, p. 31) states that the power of transforming sugar, as is well known, is not confined to the liver, but is possessed in a certain measure by the other tissues of the body, and that consequently an experimental alimentary glycosuria indicates only a general glycolytic insufficiency (in liver and tissues).

In every experiment having for its object the measure of the functional power of the liver, it is therefore important, as Achard and Castaigne have shown, to diminish previously the glycogenic power of the tissues. This point, so important in investigations upon the adult, is none the less so with the nursling, and the author therefore has made some investigations to determine whether the glycogenic power of the tissues varies in notable degree with infants in good health and those suffering from gastro-enteritis. By means of subcutaneous injections of pure sterilized glucose a determinate quantity of sugar may be introduced into the general circulation, and thus by gradual increase of the dose until glycosuria appears one may readily determine with exactness the glycolytic power of the tissues in both classes of infants.

The result of these experiments shows that the glycolytic power of the tissues of the nursling is relatively high, since the quantity of sugar so convertible varied between 50 and 80 centigrammes per kilogramme of weight, while the liver arrests only about 4 or 5 grammes; that inversely with what is observed in the liver the glycolytic power of the tissues remains about constant, whether the experiment be made upon a healthy infant or upon one suffering from gastro-enteritis; that, consequently, it is not necessary to take into account this possible source of error in investigating alimentary glycosuria in the nursling.

THERAPEUTICS.

UNDER THE CHARGE OF

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Treatment of Pancreatitis.—DR. MAYO ROBSON says that operative treatment of acute pancreatitis, especially when of the suppurative variety, is alone indicated. The symptoms being so vague, however, such a radical procedure may not always be justified. Morphine for pain and aperients to relieve distention are advisable. Subacute pancreatitis is more amenable to treatment. Distention, when present, calls for gastric lavage, and turpentine enemata or calomel by the mouth. Calomel is distinctly valuable, act-